

ABSTRACT

An apparatus and method are described for efficiently cooling the myocardium while minimizing blood dilution as well as volume buildup within the patient. A flow of cooled fluid is conducted through a percutaneously introduced catheter into the aorta where only a portion thereof is discharged while the remainder is withdrawn from the patient. The much greater flow rate through the catheter that can thereby be maintained without adverse physiological effect serves to minimize the heat gained by the fluid as a result of the catheter's immersion in blood at body temperature. By arranging the catheter such that the return flow surrounds and thereby insulates the supply flow, even colder fluid can be delivered to the myocardium.